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09/728,431	11/30/2000	Mehryar Khalili Garakani	2705-135	6083

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EXAMINER

SWICKHAMER, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/728,431	Applicant(s) GARAKANI ET AL.	
	Examiner Christopher M Swickhamer	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 8 is objected to because of the following informalities: On line 9, the phrase “the condition” should be replaced with “*the destructive break condition.*” Also on line 9, the phrase “the command” should be replaced with “*the initiate data transfer command.*” These changes remove any questions about the antecedent basis for these limitations. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-6, 14-21, 24 and 25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. .

- Referring to claim 1, on line 5 of the claim, the claim states that the data link layer is error correcting. However the detailed description does not provide a discussion on how the data link layer is used to correct errors. One skilled in the art would have to develop their own system to use the data link layer to correct errors, which results in undue experimentation to reproduce the claimed invention. Claims 14, 17, 21, 24 and 25 have a similar deficiency. The claims will be examined as best understood by the Examiner.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pereira (US 5,781,726).

- Referring to claims 1, 21 and 25, Pereira discloses a method of synchronizing two (de/compression) modems in a (voice frame) network, each of the modems being connected with a corresponding edge devices, such as central node (CN, gateway) to form a corresponding segment (Fig. 5, col. 7, lns. 60-65), the method comprising: terminating the physical layer at either end by the corresponding gateways (terminate the intermediate connection across link 201, abstract, col. 8, lns. 4-41); negotiating at either gateway a physical layer (connection from the CN to X or Y) and error-correcting data link layer (LLC2 session) with the corresponding modem (col. 1, lns. 14-34, col. 1, lns. 45-col. 2, lns. 5, col. 8, lns. 4-41); not responding to the polling modem until the CN is ready to transmit data (sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message, Fig. 7, col. 10, lns. 29-53); signaling the other gateway when physical layer and error-correcting data link layer negotiations have been completed (col. 10, lns. 4-28); and when each gateway has signaled the other that negotiations have been completed, (halting said not-ready message-sending and) sending a ready message to a corresponding modem, whereby synchronized data transmissions between the modems commences (Fig. 7, '32,' '50,' '53,' '55' and '72'). Pereira does not

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expressly disclose that the system transmits compressed voice packets, or that the CN sends a not ready message in response to polling from the modem. The system of Pereira could be modified to compress voice, form voice packets to be sent across the network, and to transmit a not ready message to the polling modem before the connection is able to transmit data from the modem.

At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the system of Pereira with compressing voice, packetizing the voice, and send a Receiver Not Ready (RNR) message to the polling modem before transmitting data from the modem. One of ordinary skill in the art would have been motivated to do this since sending voice across the Internet is an inexpensive method to communicate with another person since a dedicated connection is not required for the call. Voice over Data networks are becoming increasingly popular, and using a compression technique to reduce the amount of bandwidth while preserving an acceptable call quality. Also, by responding to a polling signal by telling the modem that the connection is not ready for the traffic benefits the CN since it can transmit a message to the polling modem and adjust the polling time between the modem and CN to eliminate unnecessary traffic between the two devices.

- Referring to claims 2, 9 and 13, Pereira discloses the method of parent claims 1, 8 and 12, wherein the not-ready message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol (see claim 1) and wherein the ready message is a receiver ready (RR) message compliant with the ITU-T V.42 protocol (Fig. 7, col. 10, lns. 29-53).

- Referring to claims 3, 15 and 18, Pereira discloses the method of parent claims 1, 14 and 17, which, after said signaling and upon occurrence of a destructive break condition in either of the segments (signaling to terminate a connection), further comprises: relaying the occurrence

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of the destructive break condition from a segment where it is detected to the other segment (Fig. 7, col. 11, lns. 18-37).

- Referring to claims 4, 16 and 19, Pereira discloses the method of parent claims 1, 15 and 18 which, after said signaling and upon receipt at either gateway from a corresponding modem of an initiate data transfer command, further comprises: relaying the initiate data transfer command from a segment where it is detected to the other segment (Fig. 7, relay the RR(final message)).

- Referring to claims 5 and 11, Pereira discloses the method of claim 4 wherein the initiate data transfer command is a Set Asynchronous Balanced Mode Extended (SABME) message compliant with the ITU-T V.42 protocol (col. 10, lns. 4-6).

- Referring to claim 6, Pereira discloses the method of claim 5 wherein the synchronized data transmissions between the modems utilizes an inherently reliable transport (any system transporting data is inherently reliable).

- Referring to claims 7, 22 and 23, Pereira discloses an apparatus for synchronizing compression and decompression between two endpoint modems linked over a (voice frame) network, the apparatus comprising: a negotiation mechanism for bringing up physical and data link layers on a segment associated with a first one of the two endpoint modems and an associated edge device, such as central node (CN, gateway) as answerer and for bringing up physical and data link layers on another segment associated with a second one of the two endpoint modems and associated leaf node (gateway) as originator (Fig. 5 and 7, col. 1, lns. 14-34, col. 7, lns. 44-59, col. 8, lns. 4-41); a signaling mechanism associated with each gateway responsive to said negotiation mechanism for signaling the other gateway and for awaiting a

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signal therefrom (Fig. 7, send polling and acknowledgement messages); a command mechanism for sending a receiver ready command to the two endpoint modems (Fig. 7); and a commencement mechanism responsive to said command mechanism for commencing data transmission/reception between the two endpoint modems (Fig. 7, characterized by synchronized data compression and decompression). Pereira does not expressly disclose that the system transmits compressed voice packets, or that the CN sends a not ready message to the polling from the modem. The system of Pereira could be modified to compress voice, form voice packets to be sent across the network. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the system of Pereira with compressing voice, and packetizing the voice for transmission across a network. One of ordinary skill in the art would have been motivated to do this since sending voice across the Internet is an inexpensive method to communicate with another person since a dedicated connection is not required for the call. Voice over Data networks are becoming increasingly popular, and using a compression technique to reduce the amount of bandwidth while preserving an acceptable call quality.

- Referring to claim 8, Pereira discloses the apparatus of claim 7 which further comprises: a detection mechanism for detecting (a destructive break condition or) receipt of an initiate data transfer command (send a RR(final) signal, Fig. 7, col. 10, lns. 29-31); a relaying mechanism associated with each gateway responsive to said detection mechanism upon either such detection for relaying the destructive break condition to the other gateway upon detection of the same and for relaying the receipt of the initiate data transfer command upon detection of the same (relay the RR(final) command to the sending station, Fig. 7); and a data discard mechanism (use a

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smart polling system, col. 11, lns. 10-17) responsive to said relaying mechanism for discarding data (discard the standard poll signal) until a modem initialization responsive to (the condition and/or) the command receipt is completed (the system uses a smart polling system where the polling signals are discarded until the connection between the devices has been established, Fig. 7, col. 10, lns. 29-53, col. 11, lns. 10-17).

- Referring to claim 10, Pereira discloses the apparatus of claim 8 in which upon receipt at either gateway from a corresponding modem of an initiate data transfer command, said relaying mechanism associated with each gateway responsive to such receipt further relays the initiate data transfer command from a segment where it is detected to the other segment (Fig. 7, send an RR(final) command from the receiving device to the sending device)

- Referring to claims 12 and 13, Pereira discloses the apparatus of claim 8, but does not expressly disclose said negotiating mechanism during said negotiations of the physical and data link layers sends from either gateway to an associated modem in response to any poll command therefrom a not-ready message, nor that the message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol. Pereira does not expressly disclose that the CN sends a not ready message in response to polling from the modem. The system of Pereira could be modified to transmit a Receiver Not Ready (RNR) message to the polling modem before the connection is able to transmit data from the modem. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the system of Pereira with sending a Receiver Not Ready (RNR) message to the polling modem before transmitting data from the modem. One of ordinary skill in the art would have been motivated to do this since responding to a polling signal by telling the modem that the connection is not ready for the

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traffic benefits the CN since it can transmit a message to the polling modem and adjust the polling time between the modem and CN to eliminate unnecessary traffic between the two devices.

- Referring to claim 14, Pereira discloses a computer-readable medium containing a program for synchronizing two (de/compression) modems in a (voice frame) network wherein the modems each are connected with a corresponding edge devices, such as central node (CN, gateway) to form a corresponding segment (Fig. 5 and 7), the program comprising: instructions for terminating the physical layer at either end by the corresponding gateways (use the central and leaf nodes as intermediaries to terminate the link, Fig. 5, col. 7, lns. 44-67, col. 8, lns. 4-41); instructions for negotiating at either gateway a physical layer and error-correcting data link layer with the corresponding modem (col. 1, lns. 14-33, col. 8, lns. 4-41); ignoring the polling messages until the receiving station is ready, (col. 10, lns. 29-53, instructions for sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message); instructions for signaling the other gateway when physical layer and error-correcting data link layer negotiations have been completed (Fig. 7); and instructions (for halting the not-ready message-sending and) for sending a ready message to a corresponding modem when each gateway has signaled the other that negotiations have been completed (Fig. 7, col. 10, lns. 29-53). Pereira does not expressly disclose that the system transmits compressed voice packets, or that the CN sends a not ready message in response to polling from the modem. The system of Pereira could be modified to compress voice, form voice packets to be send across the network, and to transmit a not ready message to the polling modem before the connection is able to transmit data from the modem. At the time the invention was made, it would have been obvious

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to one of ordinary skill in the art to combine the system of Pereira with compressing voice, packetizing the voice, and send a Receiver Not Ready (RNR) message to the polling modem before transmitting data from the modem. One of ordinary skill in the art would have been motivated to do this since sending voice across the Internet is an inexpensive method to communicate with another person since a dedicated connection is not required for the call. Voice over Data networks are becoming increasingly popular, and using a compression technique to reduce the amount of bandwidth while preserving an acceptable call quality. Also, by responding to a polling signal by telling the modem that the connection is not ready for the traffic benefits the CN since it can transmit a message to the polling modem and adjust the polling time between the modem and CN to eliminate unnecessary traffic between the two devices.

- Referring to claims 17 and 24, Pereira discloses apparatus for synchronizing (compression and decompression between) two endpoint modems linked over a (voice frame) network, each of the modems being connected with a corresponding central node (gateway) to form a corresponding segment (Fig. 5, col. 7, lns. 44-67), the apparatus comprising: means for terminating the physical layer at either end by the corresponding gateways (the central nodes are edge devices the terminate the link between the local area networks, col. 7, lns. 44-67); means for negotiating at either gateway a physical layer and error-correcting data link layer with the corresponding modem (col. 1, lns. 14-33, col. 8, lns. 4-41); ignoring the polling message until the node is ready and transmit a Receive Ready command (col. 10, lns. 29-53) means for sending from either gateway to an associated modem in response to any poll command therefrom a not-ready message); means for signaling the other gateway when physical layer and

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error-correcting data link layer negotiations have been completed (Fig. 7); and means active when each gateway has signaled the other that negotiations have been completed (for halting the not-ready message-sending and) for sending a ready message to a corresponding modem, (Fig. 7, col. 10, lns. 29-53, whereby data transmissions between the modems commences that is characterized by synchronized data compression and decompression). Pereira does not expressly disclose that the system transmits compressed voice packets, or that the CN sends a not ready message in response to polling from the modem. The system of Pereira could be modified to compress voice, form voice packets to be send across the network, and to transmit a not ready message to the polling modem before the connection is able to transmit data from the modem. At the time the invention was made, it would have been obvious to one of ordinary skill in the art to combine the system of Pereira with compressing voice, packetizing the voice, and send a Receiver Not Ready (RNR) message to the polling modem before transmitting data from the modem. One of ordinary skill in the art would have been motivated to do this since sending voice across the Internet is an inexpensive method to communicate with another person since a dedicated connection is not required for the call. Voice over Data networks are becoming increasingly popular, and using a compression technique to reduce the amount of bandwidth while preserving an acceptable call quality. Also, by responding to a polling signal by telling the modem that the connection is not ready for the traffic benefits the CN since it can transmit a message to the polling modem and adjust the polling time between the modem and CN to eliminate unnecessary traffic between the two devices.

- Referring to claim 20, Pereira discloses the apparatus of claim 19, wherein the not-ready message is a receiver-not-ready (RNR) message compliant with the ITU-T V.42 protocol (see

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claim 17), wherein the ready message is a receiver ready (RR) message compliant with the ITU-T V.42 protocol and wherein the initiate data transfer command is a Set Asynchronous Balanced Mode Extended (SABME) message compliant with the ITU-T V.42 protocol (col. 10, lns. 4-53).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Verthein et al, US 6,487,196 B1. *System and Method for Simulating Telephone use in a Network Telephone System.*
- Blair et al, US 5,170,394. *Host Network Communication with Transparent Connection Devices.*
- Rozman et al, US 5,438,614. *Modem Management Techniques.*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M Swickhamer whose telephone number is (703) 306.4820. The examiner can normally be reached on 8:00-4:30 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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CMS
February 17, 2004



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